# THE WESTERN FARMER AND GARDENER,
## AND HORTICULTURAL MAGAZINE.

Vol. V. Cincinnati, May, 1845. No. X.


### Epiphyllum Makoyii.

The CACTUS which we have figured —*Epiphyllum Makoyii*—is a hybrid between *Epiphyllum Ackermannii* and *Cactus speciosissimus*. As the portrait shows, it is a very fine flower, of the shape and size of the Epiphyllum, and of the same color as the Cereus.—It should be grown in a mixture of sandy loam, decomposed vegetable matter, and a little sand; it should receive no water during the winter, but rather a copious supply in the flowering time. The variety is named after Mr. M'COY, of Liege, in Belgium. The name of Epiphyllum is in reality incorrect, as it implies that the flowers grow on the leaves, whereas there are no leaves for them to grow on, the permanent substance of the plant, whatever may be its form, being always a mass of matter, which may be called a sort of stem, but not a leaf. If any part of any one of the tribe is to be considered a leaf, it is the small bracts which are on the lower parts of the flowers; and, therefore, they grow upon the flowers, and not the flowers upon them.

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### To Sweeten Rancid Butter.

The *Echo du Monde Savant* says:—"An agriculturist in the neighborhood of Brussels, having succeeded in removing the bad smell and disagreeable taste from butter by beating, or mixing in fresh water with chloride of lime, he was encouraged by this happy result to continue his experiments, by trying them on butter so rancid as to be past use; and he has restored to butter, whose odor and taste were insupportable, all the sweetness of fresh. This operation is extremely simple, and practicable to all; it consists in beating the butter in a sufficient quantity of water, in which put twenty-five to thirty drops of chloride of lime to two pounds of butter. After having mixed it till all its parts are in contact with the water, it may be left in it for an hour or two, afterwards withdrawn, and washed anew in fresh water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having verified the experiment, it was found that twenty-five or thirty drops to a kilogramme of butter were sufficient.

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### Important to Pork Raisers.

In conversation with Mr. DUFFIELD, at his celebrated pork and bacon factory in Cincinnati, a short time since, he informed us that an important change was taking place among some farmers of that region, in their mode of raising hogs; that there was an increasing demand in the Eastern markets for pork and bacon from young hogs, and of thinner quality than formerly; and that farmers were beginning to learn that, by selecting a good thrifty breed, and managing them properly, they can raise hogs of two hundred to two hundred and fifty pounds weight at nine or ten months old, and at a saving of one-third to one-half the expense over the old system of wintering store hogs, and slaughtering them at eighteen to twenty months old. To practise this system, the pigs should come in winter or early in spring; and special care must be taken to have them *kept thriving during their whole lives;* for if they become stunted when young, it is impossible to recover them in time for slaughtering till the next year.—*Ohio Cultivator.*

**Spirit of the Agricultural Journals.**

*Remedy for Blight and Insects on Fruit Trees.*—Dissolve one pound of soda in a gallon of rain water; shake this up in a bottle with a pint of spirits of turpentine, when they will amalgamate; then by adding more water, make up the quantity to ten gallons. It should be applied with an engine having a fine rose.—*American Agriculturist.*

*Jerusalem Artichokes in Orchards.*—Good crops of these may be obtained by planting them in rows two or three feet apart. They do not exhaust the soil like potatoes, and rather like the shade. Poor land suits them very well, as they have the power of drawing a larger portion of nitrogen from the atmosphere, than any other plant. They pulverize the soil without exhausting it, leaving it in a good condition for growing trees.—*Ib.*

*Growing Cabbages and Beans together.*—The beans are set in close double rows, with wide intervals between each pair of rows, in which the cabbages are planted in May, and afford a most luxuriant crop of green food upon heavy land.—*Ib.*

*To prevent Mildew in Wheat.*—Mix sixty pounds of silicate of soda with eighty pounds sulphate magnesia, and spread upon the wheat in the months of March or April. If lime does not exist in sufficient quantity in the land, add fifteen to thirty bushels to the acre, newly slaked, and spread broadcast on the growing wheat.—*Ib.*

*To Secure the Fruiting of a Tree.*—Select a tree well furnished with blossom buds, just as they are beginning to expand. Take a potato-fork, and with it make holes all over the surface of the space occupied by the roots, heaving the earth by pressing on the handle, and with this exertion make holes about eighteen inches apart. Having dissolved one ounce of nitre to three gallons of water, fill the holes with the solution. No manure must be given. Should, after stoning, the tree appear unable to sustain the fruit, the following preparation may be applied in the same manner:—To one gallon of blood add one gallon of water and one ounce of potash; stir the whole well together, and when it has settled, pour off the liquid, and mix one gallon of this liquid with one gallon of water, and pour it into holes made in the manner already described.—*Ib.*

*Silk Rags.*—The foundation of many a woman's fortune has been laid by hanging up a bag in the corner of her kitchen for saving rags. Linen and cotton have been the only ones considered worth saving; but a French chemist has recently discovered that silk rags, hitherto generally thrown away, are still more valuable. He transforms them, by a process called *palingenesis*, into new silk again, in the same way that India-rubber is drawn out into filaments, and woven into a durable material. By means of a dissolvent, the silk rags are made into a glutinous paste, and, like fused glass, on coming into the air, reacquire all their original strength and tenacity.—*Ib.*

*A nice and wholesome Sweetmeat for Family use.*—Pare, or not, as you choose, a quantity of sweet apples, to fill an earthen or stone jar; add a little sugar or molasses, and if the apples are not sufficiently juicy, a little water; cover with a thick paste of flour and water, and put into a brisk oven with your bread. Let them stand till morning. They will have the flavor of baked pears, and can be had fresh at all seasons.—*Ib.*

*To preserve Eggs for a long time.*—As soon as hens begin to lay in the spring, cover each egg with a thick coating of lard, or other soft grease, and then lay them with the small end downwards, in regular piles, on the cellar floor; or pack them in earthen jars, filled with melted fat, not hot; this keeps out the air. Or keep them in jars, and pour lime water on them, which keeps the air out, and does not injure them, for everybody knows that eggs are composed of lime.—*Ib.*

*To make Whale Oil Soap for Washing Fruit Trees.*—Take eighteen pounds of potash and thirty pounds of foot oil, and put in a barrel. Every other day, pour upon the mixture twelve quarts of boiling water, stirring it every day for a few minutes. When the barrel is filled up with water, the soap will be fit for use. Now put about four gallons of soap into a hogshead of one hundred and fifty gallons of water, and apply the suds to the trees by aid of the garden engine. This application is one of the best destroyers of insects known, and at the same time it is an excellent stimulant to the growth of all vegetation.—*Ib.*

*To prevent Birds and Squirrels destroying Corn.*—Soak the seed half a day or so previous to planting in a moderately strong solution of saltpetre and copperas, and dry it with ashes, plaster, or lime sprinkled over it. This preparation will effectually guard the seed from birds and squirrels, and give the corn blade, after germinating, a rapid start.—*Ib.*

*A Veteran Horse.*—There is a horse in New York forty-three years of age, and who can trot his mile within four minutes. His teeth are still sound and good. He racks and gallops delightfully under the saddle, but has a fine square trot in harness. His owner has had him in constant use since 1826, and he was formerly in a livery stable.—*Ib.*

*Oil Cake for Cows.*—In our experience of oil cake as feed for *sheep*, the addition of one pound diminished the consumption of turnips

+ is this done?

from six to eight pounds; it is probable that four to six pounds given daily to a cow, would diminish the quantity of other food three-quarters, at the same time enriching the milk afforded.—*London Agricultural Gazette.*

*Guano.*—This, and all other manures, whose value depends partly on soluble ingredients, is best applied in the spring.—*Ib.*

☞ A dry, cool, and airy room, free from all atmospheric changes, is the only place where fruits can be preserved for any length of time.

*Gypsum for Stables.*—A correspondent of the London Agricultural Gazette, says:—"In our concern, where we have a great number of horses, we use gypsum in our stables, strewing it on the floor, which arrests the ammonia, as it is formed, and thereby not only helps to preserve a most valuable fertilizer, but also renders the stable much more wholesome for the horses. If in the hot stables that are sometimes met with at inns, where the air is so charged with ammoniacal vapor, that when you enter, your eyes are affected, a little gypsum were strewed on the floor every day, all that offensive smell would be done away, and the stable be much more healthy for its inhabitants."

*Artificial Guano.*— A recipe was lately presented to the New York Farmers' Club, by Dr. Valentine, for the formation of an artificial guano, that would not cost more than one-fifth of the imported, and equally effective. The following are the ingredients:

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| Nitrate of Soda, | 20 pounds. |
| Sal Ammonia, | 10 " |
| Carbonate of Ammonia, | 5 " |
| Pearl Ash, | 5 " |
| Sulphate of Soda, | 8 " |
| Sulphate of Magnesia, | 5 " |
| Fine bone, | 60 " |
| Salt, | 10 " |
| Sulphate of Lime, | 2 bushels. |
| Meadow mud or sheet manure, | 1 cartload. |
| Carbonate of Iron, | 2 drachms. |
| Manganese, | 2 " |

*Salt for Fruit Trees.*—Mr. Jesse Dike, of Stoneham, Massachusetts, has cured his apples of black spots and cracks by sowing salt four quarts to the rod, for two seasons, round his trees.

*Texas Grass.*—At a meeting of the English Royal Agricultural Society, in February, Mr. G. H. Grieve favored the Council with a communication on Texas grasses, showing that there were several kinds highly valuable for their luxuriance and nutritive qualities, which are almost unknown to the world at large.

*Advantages of Planting Trees on Declivities.*—If a tree stands on a steep, it pushes both towards the hill and towards the declivity; but on both sides, it still preserves its branches parallel to the surface. The most fruitful orchards, and most fertile trees, are those planted on a steep hill side. It is well known that the spreading of trees always renders them fruitful. On a plain, they incline to shoot upwards.—This is sometimes done by art, but on a declivity it is effected by nature.

*Cut Worms.*—A correspondent of the Boston Cultivator says:—"To the remark that 'cut-worms may be destroyed by continued tillage, and a naked and open soil,' I beg to say, the cut-worm would not be found in corn, were it not planted in sward or sod land. They are the progeny of a species of beetle, or other insect, which could never propagate its kind without the aid of dung, which is found in grass-fields, that have been fed by horses or cattle, and in this they enclose their egg, or eggs, and sink them a given distance below the surface; hence, an autumnal or winter ploughing of such land destroys them, by exposure to the rains and frosts of that inclement season—a doctrine which at last has met with the concurrence of every practical man among us."

*To protect Hens from Vermin.*—A gentleman from Hanover requests us to state the fact that pennyroyal, woven into their nests, will perfectly and certainly protect hens from the annoyance of vermin, He generally makes the nest entirely of this strong-scented herb.—*Southern Planter.*

☞ Two tea-spoonsful of finely powdered charcoal, says the New York Herald, drank in half a tumbler of water, will, in less than fifteen minutes, give relief to the sick head-ache, when caused, as in most cases it is, by a superabundance of acid on the stomach.

☞ We have seen the following very simple plan of stump clearing, adopted with good success:—Take a strong, stiff, hard-wood stick of timber, say fifteen or twenty feet long, and six inches in diameter; cut around the stump, and take off some of the roots; then place the timber upright against the stump, and chain them together strong; from the upper end, which is now in the air, let the chains pass to the axletree of a pair of cart wheels, to the tongue of which a pair of strong oxen are attached; when all is ready, start the oxen along, and the stump "keels over" as easy as you capsize a cabbage in a garden.—*Maine Farmer.*

*Remedy for the Bots.*—A correspondent of the Albany Cultivator says:—"Having seen many horses die with bots, and many remedies given without effect, I was induced, by a merchant in Cambridge, to try the following for a horse of my own, after I had tried most of the remedies in common use without effect, and had given him up for lost:—Half pint vinegar, half pint soft soap, half pint gin, and half pint

molasses, well shaken together, and poured down while foaming. To my great surprise, the horse was, in five minutes, wholly free from pain, and ate freely; the next morning I was on my journey. I have since recommended and given the same in perhaps fifty cases, with the same good effect; not in one instance has it failed to effect a perfect cure."

*Simple and Effectual Remedy for Hove in Cattle.*—Try the remedy of an eggshell full of tar, rather than attempt the barbarous practice of sticking. If two men hold the animal's head straight, a third its tongue to the right side, he can easily put down its throat an eggshell full of tar, and in ten minutes relief will usually take place, but a second dose has never failed with my cattle, which are always kept at a brisk walking pace through the yard until relieved.—*Dublin Farmer's Gazette.*

*To make Nest Eggs.*—Take hickory wood, or some kind equally heavy, and trim the eggs in a lathe. Make them larger than a hen's egg; then whitewash or paint them, and they are ready for use.

*Fever Medicine for Swine.*—Take digitalis, three grains; antimonial powder, six grains; nitre, half a drachm; mix, and give in a little warm swill, or milk, or mush.

*Mixture for the Rot.*—Take common salt, eight ounces; powdered gentian, two ounces; ginger, one ounce; tincture of colombo, four ounces; put the whole in a quart bottle, and fill the bottle with water.

*Remedy for Cholic in Horses.*—Dissolve a piece of opium, about two-thirds the size of a hazelnut, (say about twenty grains,) and half a pint of brandy, and pour it down by the usual method of a bottle, or horn.

*To Dry your Boots.*—If you wish, after tramping through snow and water all day, to have a pair of dry boots to put on the next morning, instead of leaving them by the stove to burn, or half dry, and get hard, hang them up near the ceiling of the room, where the warm air is.

*Largest of all Pigs.*—We are informed that Samuel Robbins, of Salisbury, Connecticut, lately slaughtered two pigs, in part of the Byefield breed, nine months and seventeen days old, one of which weighed three hundred and eighty-eight, and the other four hundred and thirty-two pounds.—*Albany Cultivator.*

*Balls of Wool in Laubs Stomachs.*—Lambs dropped in winter sometimes chew and swallow locks of wool from their mothers. This forms balls in the stomach, which occasion death.—Give the lambs suitable with potatoes, &c. and this will be prevented.—*Ib.*

*Scotch Cattle.*—Some of these, being small and hardy, are better adapted to many parts of this country, than some of the English cattle. The polled Galloway would likely be very useful.—*Ib.*

*Potatoes.*—Rules to avoid the late disease in the East, or any other. 1. Plant on loamy soils, of medium dryness. 2. If stable manure is used, mix it well with loam, and not (especially if fresh,) in too great quantity in the hill. 3. Plant good sized, sound potatoes, cutting only the largest ones. 4. Plant as early as the ground is in a proper state. 5. Plant only the hardy kinds; the Mercer, or Neshanock, is becoming feeble; it would be better to introduce in the West, kinds which are as good. 6. Keep the ground clean from the start; don't work when the ground is at all wet or muddy, or after the blossoms appear, as cutting the roots is very injurious.

*Turnip Raising in Stiff Soils.*—A few weeks before sowing, spread over a few inches of old straw; burn it just before sowing time; this destroys all insects, and the fly too.

*The Locust.*—The yellow and black are easily cultivated from seed; they grow rapidly, and are very valuable for posts and timber; the pods are easily gathered when ripe, and the seeds planted in the same fall or spring; to make them vegetate soon, pour hot water on them just as they are planted. The honey locust can be propagated in the same way; but is not of much use either for timber or hedges.

*Wheat Culture.*—Plough ten inches deep before harvest; stir the land after harvest; spread manure and harrow; sow two bushels per acre; then harrow and cross-harrow. Sow for pasture lands, one and a half bushels of ground plaster per acre. The best implement to put seed wheat in with, is the five or seven teethed triangular cultivator; this puts it in just deep enough, yet not too shallow.

*Stringhalt, sometimes called Springhalt.* This is an affection of the nerves, which communicates motion to the muscle of the horse's legs. The precise nature of this defect has not been ascertained, nor has any cure for it been discovered.

*Pomegranate Melon.*—This is worthless as a table fruit, but has an exquisite perfume for a room. The Citron Watermelon is only used for preserves.

*Spent Tan and Saw Dust.*—Useful for manure, particularly for trees and shrubbery.

*Heaves or Thumps in Horses.*—This is thought to be brought on by feeding too much in bulky or rough food, as corn blades, straw, &c. The faster work you give your horses, diminish this kind of food, and more of grain, in small quantities, fed often.

*A Load of Manure.*—Commonly about thirty bushels.

*Corn Stalk Sugar.*—It is believed by the Commissioner of Patents, that all the difficulties in making good sugar from this vegetable, will be soon completely removed.

*Cheap Mode of Rearing Hogs.*—When pigs are farrowed in May or June, keep in a close pen the first summer, and feed with skimmed milk and boiled potatoes; give them pasture ground in the fall, and in the winter give them entirely boiled potatoes; turn them in the spring in a cow pasture, with rings in their noses; then give them raw potatoes; put them up the last of September, and feed with boiled potatoes and a little milk; no grain or meal need be used.

*Pork for* 1845.—It seems probable, from present prospects, that pork will command at least remunerating prices the coming fall, and those farmers who had the foresight to see this, and have wisely provided themselves with a sufficient stock of a good breed of hogs, will be likely to reap their reward.—*Albany Cultivator.*

*Osage Orange.*—This grows wild in Missouri, Arkansas, &c., where it is found twenty to twenty-five feet high. It has lately become a favorite for hedges, and has succeeded well everywhere in the Middle and Eastern States. It is easily raised from the seed. It is very branching; each branch being armed with numerous sharp thorns. The wood is tough and solid. The male and female flowers are on separate trees; the female bears fruit in a very few years. The balls contain from one hundred to two hundred and fifty seeds. It will bear trimming and clipping well, and the hedge can be made very thick and close at the bottom. It is very beautiful in appearance.—*Ib.*

*To tell the Height of Timber Trees.*—Take a stick just long enough to reach from the ground up to the observer's eye, who then paces the required distance from the tree, throws himself on his back, looking towards the tree, while a second person holds the stick upright at his feet, and places his eye at the mark on the ground, and ranging with the top of the pole, towards the tree; if the top of the pole strikes above the straight part of the trunk, the stick of timber will be too short—if at or below the first crook, it will be long enough.—*Ib.*

*Pumpkins and Cimlins in Corn-Felds.*—If the land is rich, and the crop of corn very fine, it is folly to plant these things among it; for the corn will pretty much smother all.—*Ib.*

☞ Swamp Willow, or Basket Willow, is well worthy the attention of farmers.—*Ib.*

*Flax Culture for the Seed.*—The culture, in clay loams, has the effect to keep the soil loose, and makes it good with the stubble for wheat. If the gluten of the stem and seed of flax presupposes a great assimilation of azotized matter; the action of the roots of the flax plant on a tenacious soil seems designed by nature to fit that soil for the reception of ammonia, for which we are told allumine, or clay, has a great affinity.—*Ib.*

*Sheep's Tails.*—There seems to be no advantage in cutting them off; on the contrary, if the tails are shorn before the sheep are turned to grass, there will be no more dirty ones than if they had no tails, and the wool of course will pay more than four-fold for shearing.—*Ib.*

*Scratches in Horses.*—The sprinkling of plaster of Paris on stable floors, is not only an excellent plan for arresting the fertilizing gas of ammonia for manure, but it prevents horses having the scratches, or sore heels.—*Ib.*

*Culture of Water-Melons.*—Remove the earth sufficiently to receive about half a bushel of horse stable manure and leached ashes, to be thrown in for the hill and levelled; throw about same quantity of road-side gravel or sand, and plant the seeds therein; then scatter over the hill a small quantity of broken or powdered charcoal. Water occasionally with wash-water, or from the sink.—*Ib.*

E. J. H.

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### The Wheat Insect.

A correspondent of the New York Mirror, gives the following account of an occurrence which came under his own notice, and which may serve to throw some light upon the nature and character of that plague of farmers,—the wheat insect. He says:

"In the spring of 1844, I placed a bag containing half a bushel of white flint wheat in a seed drawer, under glass, and near the furnace of my Green-house. On the 6th of March, 1845, I opened the bag, and to my surprise found thousands of living insects, such as are now presented to you; some were on the point of leaving the kernel, others were just commencing to eat through, and many were perfectly formed and running about in all directions. Six years ago I was in the habit of soaking my early grains in salt brine for the purpose of destroying the egg of the insect, which I assured my neighbors, much to their amusement and unbelief, *was* ensconsed in the kernel. Now, by accident, the fact is made manifest. The insect would not have appeared until June, perhaps, had the wheat been sown. The warm situation it occupied in the Green-house, brought it thus early to maturity."

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Soap Suds.—Apply them to melons, squashes, and cucumbers, or to any plants infested with the plant-louse.

### Miscellaneous Notes.

☞ A gentleman, who has had full experience in the matter, informs us that the *Kalmia Latifolia* can be successfully grown in the open ground, without any protection from the sun whatever, except like all other plants when first set out. In the neighborhood of Chillicothe, among the Jackson hills, and in the Hocking Valley, it flourishes in great luxuriance.

☞ It appears that the Double Wild Rose, (called the Worthington Rose,) was found on the bank of Kinnitrimick, by Mrs. Crouse, and was cultivated by her. It was brought first to Chillicothe by Col. Madeira, and was cultivated by him, Col. Swearingen, and Mrs. Worthington. We suggest that it be called after the place of its locality,—the Kinnitrimick Rose. This will obviate all injustice, and place the matter in its proper shape.

☞ The reason that the Cockle-bur, that great pest on farms, cannot be destroyed by being cut off once a year, is that Nature has provided for its propagation by bestowing on it seed vessels, which ripen at two different times of the year. This will be found to be the case on careful examination.

☞ The best thing to destroy the Splinter-bug, or Scale, as it is called, which destroys the Orange tree in the South, it is said is to wash with whale oil, soap suds, and tobacco infusions.

☞ The Hon. H. L. Ellsworth, in his most valuable Report of Patents, most justly observes "that the science of Agriculture has now, at length, become a general study, and much greater improvement may be expected. Worn out lands, that have been, as it were, abandoned, are now being reclaimed under scientific treatment. Guess-work, and hereditary notions, are yielding to analysis, and the application of chemical principles. The writings of learned agriculturists in Europe are translated into the English language, thus pouring a body of new light upon the path of the husbandman." In addition to this, we may remark that, what is the most important consideration of all, is, that the most industrious and careful attention is being paid by agriculturists and horticulturists to every matter that is transpiring in the immediate neighborhood of all cultivators, to adopt every produce and practice to the particular soil, climate, and circumstances in which they are operating.

☞ There is another product which ought not to escape the attention of agriculturists, viz: Mustard. The demand for it is great, and the price paying well for the expense and labor of raising it. The American seed is considered superior to the English. Brown Mustard raising has proved profitable in some parts of Ohio.

☞ "The colors of Indian corn depend on that of the epidermis, or hull, or of the oil; the latter, when yellow, showing its color through a transparent epidermis, while, if the hull is colored and opaque, the grain presents the same color. It appears that the superiority of one kind of corn, as the Burden and Canada, over another, as the Tuscarora, is surprizingly manifest; one is filled with oil, the other has no trace of it, hence the superiority of the former, and the yellow of most kinds, for fattening animals. People of weak digestion should not eat the meal of the yellow kind, containing so much oil, because it is more difficult to digest. The yellow color of the Golden Sioux, an eight-rowed corn, is due to the color of the oil.—Brown corn has a darker color, dependent on the *combined* colors of the oil and epidermis. Red and blue corn owe their lively hues to the colors of the epidermis, and not to the oil. In the Rhode Island White Flint, (a favorite corn in that State,) the oil is transparent and colorless, and the epidermis is likewise free from color, and is nearly transparent; hence the meal is white, and the quantity of oil being large, it is less liable to ferment, and become sour, than some other varieties, as the Tuscarora, and is in very good repute."

We extract the above from Dr. Jackson's communication on analysis of grains, published in the Commissioner of Patents' Report. We have corrected it in one particular, where he speaks of the Golden Sioux being a twelve rowed corn, whereas it is only eight; it is the Dutton that is twelve rowed. There is an explanation of the cause of some corn popping, which probably is known to very few. "The oil in the horny portions of the grain is contained in little six-sided cells, in the form of minute drops, visible in a thin section, under a good microscope. When a grain of corn is heated to a temperature sufficient to decompose the oil, a sudden explosion takes place, and every cell is ruptured by the expansion of gaseous matters arising from the decomposition of the oil, and the grain is ruptured at the weakest point in the arch, and is completely evoluted and folded back. Now, on examining the cells again, they will be found lacerated, and swollen much out of shape. If an attempt is made to pop Tuscarora corn, it will be found never to succeed; hence, the curious phenomenon, so familiar to every child, though seldom, if ever, understood by its parents, is to be attributed entirely to the decomposition of oil, and the formation of carburretted hydrogen gas, such as is sometimes used in lighting large cities." It seems by this that the most popping corn contains the most oil, therefore what is called pop corn, or that corn which pops the most, must be, according to this statement, the best for fattening animals. Mr. Ellsworth says:—"The culture of the grape for the table is increasing, and promises to be a source not

merely of pleasant luxury, but in many parts of our country of very considerable profit."—In this neighborhood, Cincinnati, and on the Kentucky side of the river, both Natives and Germans are planting the vine in very considerable numbers, and we doubt not that we shall see good wine, equalling in flavor, and generally excelling in richness, the medium choice wines of Germany.

☞ In our last number there was an original article on the cultivation of Madder. There is a great demand for it abroad. We think that some of our farmers may embark in its cultivation with much profit.

☞ Here is a recipe for making a good dye from common garden purslain: "Take two bushels of purslain, (*portulacea,*) known as 'pursley;' add a sufficient quantity of water to cover it, when pressed down into the kettle, and boil until thoroughly cooked; then strain off the liquor; also, one pound of ground logwood, boiled separately; dissolve one quarter of a pound of alum in a sufficient quantity of water to cover four pounds of wool or cloth; then boil the wool or cloth in the alum water two hours; then add the purslain liquor and the logwood, and boil two hours more. When the article is first taken from the dye, it will have a purple hue; but will soon turn to a handsome blue, on being exposed to the air. The quantity may be increased or diminished as required, observing the above proportions."

☞ Several trials made with the Artichoke, indicate that it is one of the most valuable for stock which can be cultivated. A few years ago, Dr. Martin raised a considerable number, and probably does still, in some rich ground, rather low and not much suited for other purposes. The produce was very large, and at the rate of about one thousand bushels per acre.—They are principally harvested by hogs, which are turned in and allowed to root them up as their appetite prompted. They do well as long as these last. A great advantage in this root is, that it will lie in the ground all winter. The tops can be used for fodder.

☞ The Seed-potatoes from Western Pennsylvania are about the best change for this section of country. They raise very fine crops there, and it is highly advisable for us to get our seed often from a distant point.

☞ Mr. Ellsworth states that he could hardly suppose that such vast quantities of Strawberries are sold in the markets of Cincinnati, as one hundred bushels daily, as well as about the like quantities of Raspberries, and then Blackberries which follow in succession. This will give our neighbors in the East some idea of our prospects in this way for fruit. For quantity, quality and size, all combined, we think we shall soon surpass the world beside.

☞ We have often thought, and indeed know, that the budding of the peach on the plum stock is an advantage to the tree in point of durability, particularly on the softer kinds, as the Native Merripin, or Horse Plum. It will preserve it, too, from the peach worm. It is not so easy to succeed on plum stocks, but we think there are evident advantages in the plan.

☞ One of the many advantages of raising fruit on a farm, particularly near large cities, or convenient for a market, either at home or abroad, is, that the attention necessary for the trees, (and this must not be neglected,) can be performed at all periods of the year; so that, different from most of the other field crops, the labor of raising pomological productions, does not require exertion nearly at one season, or only a portion of the year, when it is often difficult to get through the rush of work. Trees can be nursed in winter, as well as in summer; and indeed there is much to be done to them at that season, which will forward their health and prosperity.

☞ The more we see of the Indiana Farmer and Gardener,—and the eighth April number is just before us,—the more we are delighted that such a scientifically and practically informed man as Mr. Beecher has put his shoulder to the wheel of the great Agricultural improved carriage, now moving forward with such a majestic and steady progress through the whole civilized world. We have no narrow views on this subject, and we hope little contractedness of feeling on any; and we do hail, with real satisfaction, even those who are capable of doing more good than ourselves. We hope we do some good, but we are glad to have those in the field who can do more.

☞ Col. W. H. H. Taylor has shown us a specimen of fine wool, staple rather long, clipped from some sheep raised by Mr. Freeman Hunt, near Lexington, Kentucky, part Bakewell and part Saxony. Some of these sheep clipped ten pounds of wool. They are of large size, and would, both for wool and carcass, together, fetch about thirteen dollars per sheep, at present prices.

☞ We hail with pleasure another spoke in the Agricultural wheel, and we doubt not, like Mr. Beecher's, at Indianapolis, it will prove a good one. The Western Reserve Magazine of Agriculture and Horticulture, edited by Mr. F. R. Elliott, published semi-monthly at Cleveland, Ohio; terms—one dollar a year. We doubt not this publication will be much assisted by Dr. Kirtland, who is a host in himself in the horticultural line. The first number, for March, augurs well.

☞ Clover is a profitable crop raised for seed at four dollars a bushel; more profitable, in fact, than any kind of grain.

**Grasses of the West.**

NO. II.

[CONTINUED FROM LAST VOLUME.]

We shall now notice the Meadow Foxtail Grass (*Alopecurus pratensis,*) of botanists, of which an engraving is given. We gave a description of this grass in our Miscellaneous Notes, in the seventh number of the present volume of this work. This grass is a very generally diffused species, being a native of Britain, and of most parts of Europe. Its herbage is held to be very nutritive, and it appears to be grateful to most stock, but particularly to sheep and horses. It is a very early grass, is perennial, and forms a very considerable part of the richest of the English pastures. It does not attain its full growth for the first two or three years, on which account it is not so well suited for alternate husbandry.—This plant, on account of its early growth, its permanence in the soil, and the quality and value of its produce, deserves to be cultivated everywhere, but particularly when the land is intended for long pasturage. The soil in which it is chiefly found in England, is where it is neither very moist nor very dry; but when the land is rich, it is very productive. It also does well in water meadows. In the Woburn experiment, we find the results give nearly three-fourths of produce greater from a clayey than from a sandy soil, the grass from the latter being comparatively of less value in the proportion of four to six.

We are desirous that our Western farmers should send us accounts of their experience in the cultivation of grasses, and make experiments in some of the valuable English grasses now to be obtained in Cincinnati, at Huxley & Co.'s, near the Dennison House, Fifth street, and among some others advertised on our cover, the above mentioned grass,—the Meadow Foxtail.

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**The Guillotine Straw-Cutter.**

We have witnessed the operation of the *Guillotine Straw and Corn Stalk Cutter,* at Huxley & Co.'s, near the Dennison House. It has made mince-meat, as the saying is, of two large bundles of the stoutest (dry of course,) corn stalks, in a very few moments. Mr. Caldwell, the President of the Hamilton County Agricultural Society, has taken it home, and speaks most favorably of its strength, rapidity, and simple plan and movement. One other kind, nearly double the expense, got by Mr. Caldwell in this neighborhood, "gave out," as the saying is. Mr. Caldwell desires us to report, that he is well satisfied that it is capable of cutting up, with rapidity, and sufficient strength, the largest corn-stalks. Mr. Caldwell will publish a report of it from his own pen in our next number.

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☞ Till clay soils when neither too wet nor too dry; fibrous rooted plants are best on clay, as wheat, beans, oats, clover, cabbage, grass, &c. Anything which will produce permanent friability in clay soils, such as sand, lime, burnt clay, loose light vegetable matter, or long unfermented manure, will alter its texture and improve its quality.

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Work corn in this manner:—First harrow with a good implement; then plough first up then down between the rows; then use the expanding cultivator, with shovel teeth.

## LECTURE,
ON
## Comparative Anatomy and Diseases of Animals.

[CONTINUED.]

We find the same progressive development in the alimentary organs of the ENTOMOSTRACANS, or *articulated* animals, varying, however, with the circumstances that surround them. The general division of the canal into digestive, absorptive excrementitial sections is perhaps more clearly seen in this, than in the preceding type; not only is the gastric dilatation, or stomach, more marked, but the intestines, instead of being of the same calibre throughout, now present one section which is purely absorbent, and another only excrementitial. The three acts of nutrition are no longer confounded, but each has its place. Though the intimate organization of the canal be less perfect, its constituent layers being less distinct, in some articulated animals, as the *leech, earth-worm*, &c., than in the higher Molluscs, the reverse is the fact in most *Entomostracans*. Another evidence of progressive development of this apparatus, in the type before us, is that the chewing organs are also appropriated to locomotion, as in the higher classes of this group. This may be called progression, though at first sight it would appear otherwise, because we shall find it constantly occurring in the highest links of the chain, and belonging to the most complete forms of animal organization. We shall not find this in the *Annellidæ*, (worms,) in which the alimentary apparatus would seem to be less perfect than in the *Molluscs;* for, instead of a canal longer than the body, and folded, it is a straight tube, with no ventral dilatation, and but one gland, which, indeed, is a simple *cæcum*, opening on each side into the intestine.

The *Vermiform Entomostracans*, or worms, are not all so dificient; in the *Lumbricus*, (earthworm,) we find a decided enlargement for a stomach, which is round, very muscular, and furnished with a dense epidermis, which supplies the deficiency of teeth. These latter organs, too, are found in some, as in the *leech*, where they consist of three plates, or horny teeth, in the bottom of their mouth, so arranged that their free edges meet. The *Nereids* have two lateral teeth. In those *Entomostracans* which have jointed extremities, the digestive organs are more developed. In the *Myriapods, Crustaceans, Arachnidans, and Insects*, or *Hexapods*, the locomotive organs are adapted to biting, or bruising, their food; the mandibles, or jaws, of some of these are manifestly a mere modification of the anterior extremities; in the *Myriapods*, and some *Crustaceans*, (crabs,) we can almost follow it step by step, so much do the posterior mandibles resemble feet. The anterior pair, generally the largest, are called the *mandibles*, the posterior are denominated the jaws. The number of these appendages varies, and decreases in the same ratio as the organs of locomotion; thus the *Myriapods* have one pair of toothed mandibles, or jaws, followed by four jaws joined together, representing a sort of divided lip, and several of the anterior feet are applied to this lip to aid in chewing. The *Crustaceans* have six jaws, the *Arachnidans*, (spiders,) or *Octopods*, and the *Hexapod insects*, (flies,) have but one pair of mandibles, and one pair of maxillæ. Besides the parts we have just mentioned, these animals have two lips; one of these, the *labrum*, is above and before the mouth, while the other, inferior and posterior, preserves its appropriate name, and is in some Hexapods furnished with a sort of tongue, as butterflies and musquitoes. In those that use liquid food, the jaws and lips are replaced by a sort of sucker, which seems to be a simple transformation of these parts, which are sometimes represented by a beak, called a *rostrum;* sometimes by a membranous trunk, as in the Octopods and Hexapods. In some insects, that undergo a complete metamorphosis, as the *Lepidoptera*, (butterflies,) the larva using different food from the perfect insect, we see the jaws converted into this rostrum, or trunk, during their evolution. The chief advance of the digestive organs found in the *Myriapods*, consists in the new characters of the mouth and appendages, for the digestive canal of these *Entomostracans*, like that of the *Apods*, runs almost directly from one end to the other, having nearly the same calibre throughout, with only a slight enlargement for a stomach; this arrangement is explained by the generally carniverous character of these animals, and their leech-like form. But in the higher classes of this type, in the crabs, in the *Octopods* and in the *Hexapod insects*, at the same time that several parts of the body unite to form unequal segments, a thorax and an abdomen, the alimentary canal generally undergoes two important modifications; instead of being straight, it has numerous convolutions, by which means it preserves the length necessary for the habits of the animal, although the body is short, and it also has one or more dilatations, marking the separate physiological sections of the apparatus, and aiding, no doubt, in the perfection of its function. The large stomach, or gizzard, is the most constant of all these dilatations; it is found alone in the *Crustaceans* (crabs,) and most *insects*, but in many species of the latter class, especially the herbivorous kinds, it is preceded by one or two membranous dilatations, called the *crop* and *venticle*, from their analogy to similar parts in birds. An alkaline fluid modifies the food while it remains in these parts. The gizzard, on the contrary, completes the mastication, and is armed with cartilaginous or bony plates, which are brought into apposition by strong muscles; these are best studied

in the *crabs* or *lobsters;* in the latter, these plates are only found near the pylorus, and are hence called pyloric teeth. In some species of this type, the gizzard is replaced by a membranous stomach. The intestine is pretty well divided, especially in the insects, into a small, or chylifying, and a large, or excremential portion; the former is also provided with glandular appendages, which furnish their secretions to aid chylification. The large intestines of many *Entomostracans* terminate in an opening that is also the organ of generation; in others they are separate, as in crabs and worms. Three layers may be distinguished in the intestinal walls of *Crustacea*, (crab family.) 1. An epidermic layer, extending to the gizzard, where it is of a horny consistence, like the external covering. 2. A middle dermoid membrane, which is vascular, and the absorptive portion. 3. The muscular coat, best exhibited in the gizzard. The liver is sometimes represented by congeries, or lobules, of little blind vessels, as in the *Crustaceans*, or by a true gland, often large, as in the *Pulmonary Arachnidans*, or by numerous canals, opening into the chylifying portion of the intestines, and furnishing a yellowish liquid, inducing the belief that these are the organs which secrete bile.

The different physiological sections of the alimentary canal, and the perfection of their varied characters, are most finely exhibited in their highest development in the Vertebrata, or animals having a backbone; each of these sections acquires new importance, and concurs in giving that perfection to nutrition which is requisite for the more complicated organization. Here are organs appropriated to the mechanical and chemical modification of the food, an absorbing surface, and an excrementitial canal, each part admirably adapted to its function.—The mouth is here a true cavity, in which the food is detained to be more completely subjected to the combined action of mastication and the saliva. How different is the masticating apparatus from what we saw in the *articulated* animals! and yet we may trace a close relation between the jaws of the Vertebrata and those of the Entomostracans, which were borrowed from the locomotive organs: here the solid portion, instead of being external, is covered with muscles; instead of presenting free extremities, they are firmly united, so that they act in pairs, and the muscles, which act upon them, are so arranged that the whole apparatus must form part of the mouth, instead of projecting before it. The mastication, which will be produced by the meeting of the corresponding edges of two pairs of maxillæ, now become two jaws, covered with soft parts, will require the aid of resistant phaneric productions, which must be the immediate instruments for the division of the food; they are the teeth and beaks. The borders of the mouth are sometimes formed by a fold of the skin, often very fleshy, and well adapted by their form, size, and contractile power, to exert a powerful suction, or to aid in the seizing of food. Others have no lips, and then the integument is applied directly upon the edge of the jaws, where it is generally armed with phaneric products, that form rows of calcareous teeth, or a horny layer, which constitutes the beak, as in birds, &c. In all the *Vertebrata*, or backbone animals, the bottom of the mouth is furnished with a tongue of various form, dimensions, and organization; sometimes so long and muscular as to become an organ of prehension; or smaller, but moveable—it aids in swallowing. In some species it is only rudimentary: in some its surface is covered with teeth, or epidermic projections, to assist in bruising the food; it is also very frequently the seat of an especial sense, that of *taste*. This organ has a set of bones, firmly united, or only jointed together, constituting the *os hyoides*. The gastric enlargement is generally much larger than those portions of the canal which precede or follow it; as we ascend in this type, we find it more and more obliquely placed, and curved from right to left, in its passage from the œsophagus to the small intestine, so as to retain the food and render chymification more complete. The form and size of the stomach always depends upon the nature of the food, simple in the carnivora, and often divided into distinct sacs in those essentially herbivorous; sometimes its surface is also greatly extended by large and numerous folds. The small intestine, also furnished with many of these folds, is generally of small calibre, and very crooked, its convolutions and length being proportioned to the herbivorous habits of the animal; this portion of the canal is especially remarkable for its *villi*, scattered over the surface, which give the peculiar character of an absorptive organ, most especially presented in this section by the higher animals. The separation of the two intestines is most clearly defined in the herbivora; besides the difference in calibre, which is sometimes the chief character, we often find a valve at the limits of the small intestine to prevent the excrementitial matters returning into the absorbing section; the passage from one to the other is also often marked by culs-de-sacs, which are secreting organs. The three coats are progressively more and more easily demonstrated in the *Vertebrata*. The muscular layer is not subject to the will, and is distinct from the muscles of locomotion, except near the openings where it participates in the characters of the subcutaneous muscles to which it seems to belong, rather than to the intestine; that is, it is controlled by the will. The crypts acquire considerable development, and occur as compact, glandular masses; their situation, and the opening of their excretory ducts, becomes more and more constant. We generally find the salivary glands of the mouth, next to the liver, emptying its bile into the up-

per portion of the small intestine: then the pancreas, called the abdominal salivary gland, whose ducts open near and sometimes with those of the liver; besides many others, isolated or in groups, scattered over the abdominal surface. The phaneric products are generally situated near the entrance of the canal, where they perform their office of mastication.

This is a general sketch of the advancement of the alimentary organs in the *Vertebrata;* but, in their several classes, we shall find important differences in the manner of the progression, and in the arrangement and form of the apparatus; we shall, therefore, take them up separately, and commence with the lowest, the FISHES, in which we first find the new arrangement of the jaws above alluded to, which enables them to dilate the mouth for the reception of their prey. This cavity is furnished with numerous teeth, which are concentrated near its entrance, and scattered, in some species, over the surface of the mouth and throat, as well as on their small tongue. This multiplicity of teeth is only observed in some of the *bony fish*, as the *pike* and *salmon;* the *cartilaginous fish*, (sturgeons, &c.) are less liberally provided, having teeth on their jaws only. The adaptation of the form of the teeth to the nature of their food is very clearly exemplified; fish are generally very voracious, and immediately swallow their prey, which is mostly taken alive: hence they have pointed and forked teeth, and some for cutting, a few for bruising. The intestine is usually short, nearly straight, and gradually decreasing towards the anus, without anything to mark the absorptive and excrementitial portions, except that we sometimes find a valvular fold between the two parts. In the *rays* and *sharks* it terminates in a cloacus, where the urine and genital products are mingled with the solid excrements. The other animals of this class have a separate passage for the genito-urinal excretions. The mucous membrane is generally soft, often velvety, and furnished with villi, in the stomach and commencement of the intestine, where some folds are also found. A thin serous membrane covers the intestine, and forms a mesentery.—There are scarcely any organs of secretion about the mouth of fish, and no salivary glands, which is what we should expect, as there is little mastication. But the liver is a rather large, consistent glandular body, divided into several lobes, among which is a gall-bladder. The pancreas is first observed here; in the *osseous fishes* it is in the simplest form, opening about the pylorus; in the *cartilaginous fish*, the pancreas becomes a true conglomerate gland.

In the AMPHIBIANS, the different sections of the canal are more distinct than in fish.—The mouth is widely cleft, except in the genus *Proteus*, and furnished with small pointed teeth, adapted solely for seizing and not chewing, their prey; they are not so abundant as in the previous class, and are placed on the jaws and palate. The tongue varies in size, and in some *Batrachians* it is adherent anteriorly, so that it is bent upon itself when protruded.—The œsophagus has longitudinal folds, which render it susceptible of great dilatation, as is the stomach also; this viscus inclines to the right, grows narrower at the pylorus, which is so small as to mark the boundary between this and the next section. The intestine is attached by a serous membrane, and is generally short, except in the tetard, which feeds upon vegetables. The two portions are sufficiently marked, especially in *frogs* and *salamanders*. The large intestine terminates in a cloacus. There are no salivary glands in the mouth, because the food is swallowed without mastication, but there is generally a considerable pancreas behind the stomach. The liver is simple in the tadpole after their metamorphosis.

Passing from the *Amphibia* to the *Reptiles*, we find little progress in the development of the alimentary canal. Sometimes, however, the stomach is pretty well developed, and placed rather obliquely, as in the *Chelonians*, (tortoises;) the two portions of the intestine have a different calibre, with sometimes a valve, and occasionally a cœcal appendage at the place of their union. The internal surface has numerous folds, which gives them a greater capacity than in the inferior animals. The mouth, which is deeply cleft, is capable of great dilatation, the lower jaw being articulated with moveable pieces that admit of great distension; this suits the carnivorous voracity of these animals, and enables them to swallow prey larger than themselves, the œsophagus and stomach having the same dilatability, by reason of their longitudinal folds. In the *Chelonians*, which generally feed upon vegetables, and animals proportioned to the size of their mouth, the lower jaw is articulated into fixed pieces, and the cavity does not admit of the same degree of expansion. In the *Ophidians*, (serpents,) *Saurians*, (lizards,) and *Crocodiles*, which are so voracious that they swallow enormous prey alive, and without mastication, the teeth are numerous, pointed and fanged, adapted to holding, seizing, and sometimes cutting; they are situated upon the edges of the jaws, sometimes also in the palate, and generally set in the integument of the mouth, though in *Crocodiles* they are implanted in sockets. Some serpents have venomous fangs, which are maxillary teeth, traversed from their base to near the summit, by a canal embraced by a portion of the membrane of the gum; their insertion corresponds to the excretory duct of the parotid gland, which forms a vesicle at the base of the fangs. In biting, these fangs press upon the vesicle, force the liquid into the canal of the tooth, and thence into the wound. The *Chelonians* have no teeth, but the edges of the

maxillæ are furnished with plates of horny matter with uneven edges, with which they bruise the algae and testaceans that constitute their food. The tongue is rudimentary in the *Crocodiles* and *Chelonians*, but largely developed in *Serpents* and *Saurians*, in which it is forked, and remarkable for its rapid motions. The tongue of the *Chameleon* is eminently distinguished by its form and extensibility; it is like a long cone, the end of the tongue being largest; this is darted with extreme rapidity upon insects, which are entangled by its very viscid secretion. The intestines of all *Reptiles* terminate in a common cloacus.

The salivary organs are more developed in the mouths of serpents, than in any other animals of this class; in the venomous species especially, we find voluminous glands behind the eye and among the maxillary muscles, which are analogous to our parotids, except that they secrete a terrible poison, instead of simple saliva. The pressure of the muscles upon those glands in the act of biting, causes an abundant flow of the venom, and thus contributes to the fatal effects of such wounds.

(To be Continued.)

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☞ Our fathers have left us a noble inheritance, and it is our duty to improve it. What surer basis can we have for national wealth, than a learned and enterprising agriculture? How can we more effectually strengthen the ties of interest that bind the extremities of our country in indissoluble union, than by augmenting the number and the value of their useful productions? How can the intelligence of a people be more favorably developed, than by an art which gives so wide a scope to comparative sagacity, and which brings its conclusions to the test of immediate experience? Who are more likely to be devoted to their country, than those who have attached the hopes of their children to its soil? There is, besides, in the profession of agriculture, something so congenial to republican manners, that we should naturally expect to see the freest country the best cultivated. Remote from the contest of sordid passions, and surrounded by all that is necessary to his happiness, the husbandman has no inducement to calculate the interest upon political corruption. A laborious life, spent in the open air, in the majestic presence of Nature, lends a corresponding simplicity and elevation to his character. In public stations, a patriot is often driven from his purpose by the jealous opposition of his rivals; or by the invincible prejudices of his age, he must at least sacrifice his freedom to the duties of his office; but in a life devoted to agricultural improvement, the purest sources of rational enjoyment are united: the first want of a generous spirit is that of being useful to mankind, the second is that of liberty.—*Michaux.*

### Clean Culture.

It is a fact, that ground, which is kept from vegetation of any kind, will not dry up so much as that on which a crop is grown. There are many who doubt this, but if they would make a proper examination, their doubts will be removed. Make an experiment—take a piece of ground in the garden, and hoe it over every day, or often enough to keep all kinds of vegetation from starting. Sow another piece adjoining with grass, or some kind of grain. After a drought of two or three weeks, examine both pieces by digging into them with a spade or shovel. The earth of the grass or grain plat will be found dry, like ashes, to the depth of a foot or more. The other will be dried in only two or three inches—below that, it will be found moist. Examine the ground in an orchard, in a dry time; it will be found dry to a great depth. If there is a tree in your cornfield, see if the ground is not much dryer near it, than on similar ground away from the reach of its roots. The fact is, the roots of vegetation bring up the moisture from a greater depth below the surface, than it could be done by simple evaporation. This may be known by noticing how much more moisture is required to support a crop of corn, when the stalks are nearly full grown, than in its earliest stages.

Now, from all this we deduce an argument in favor of *clean culture*,—that is, a culture which permits no useless vegetation to grow among cultivated crops,—the advantage of which would be to give the crop the whole benefit of the moisture, and other nutriment of the soil, instead of giving a portion to worthless weeds.

In a dry time, we frequently hear farmers say,—"It will not do to work my corn or potatoes; they need all the grass and weeds to keep the ground from drying up." Now this, as we have shown, is all a mistake,—the grass and weeds make the ground dry faster and deeper.

But it has been alleged, that corn has been injured by ploughing or working it when the weather was very dry. We admit that this effect may have followed under particular circumstances. That is to say, if corn gets too large before it is worked, injury may be done. The reason is, that the roots have become extended, and the plough cuts off so large a portion of them, that the remainder cannot supply the stalk, and it soon withers. This is the way the "*fired*" corn, sometimes spoken of at the South and West, is generally produced.—*Albany Cultivator.*

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☞ Preserve leached and unleached ashes, which have accumulated during winter, to be applied to corn in the hill, or to meadows.

From Hovey's Magazine of Horticulture.

## Progress of Horticulture in Indiana.

BY REV. H. W. BEECHER.

The Horticultural Society's Fair is held annually, on the 4th and 5th of October.—Experience has shown that it should be earlier; for, although a better assortment of late fruits, in which, hitherto, we have chiefly excelled, is secured, it is at the expense of small fruits and flowers. The floral exhibition was meagre,—the frost having already visited and despoiled our gardens. The chief attraction, as in an agricultural community it must long continue to be, was the exhibition of fruit. My recollection of New England fruits, after an absence of more than ten years, is not distinct; but my impression is, that so fine a collection of fruits could scarcely be shown there. The luxuriance of the peach, the plum, the pear, and the apple, is such in this region, as to afford the most perfect possible specimens. The vigor of fruit trees in such a soil, and under a heaven so congenial, produces fruits which are very large, without being coarse fleshed; the flavor concentrated, and the color very high. It is the constant remark of emigrants from the East, that our apples surpass those to which they have been accustomed. Many fruits which I remember in Connecticut as light colored, appear with us almost refulgent. All summer and early fall apples were gone before our exhibition; but between seventy and a hundred varieties of winter apples were exhibited. We never expect to see finer. Our most popular winter apples are: Yellow Bellflower; White Bellflower; [called *Detroit* by the gentlemen of Cincinnati Horticultural Society,—but for reasons which are not satisfactory to my mind. What has become of the White Bellflower of *Coxe*, if this is not it?] Newtown Spitzenberg, exceedingly fine with us; Canfield, Jenneton, or Neverfail, escaping spring frosts by late blossoming, very hardy, a great bearer every year, the fruit comes into eating in February, is tender, juicy, mild and sprightly, and preferred with us to the Green Newtown Pippin, keeping full as well, bearing better, the pulp much more *manageable* in the mouth, and the apple has the peculiar property of bearing frosts, and even freezing, without material injury; Green Newtown Pippin; Michael Henry Pippin, very fine; Pryor's Red, in flavor resembling the New England Seek-no-further; Golden Russet, the prince of small apples, and resembling a fine Butter Pear more nearly than any apple in our orchards, an enormous bearer, some limbs exhibited were clustered with fruit, more like bunches of grapes than apples; Milam, favorite early winter; Rambo, the same. But the apple most universally cultivated is the Vandevere Pippin, only a second or third rate table apple, but having other qualities which quite ravish the hearts of our farmers. The tree is remarkably vigorous and healthy; it almost never fails in a crop; when all others *miss*, the Vandevere Pippin *hits;* the fruit, which is very large and comely, is a late winter fruit, yet swells so quickly as to be the first and best summer cooking apple. If its flesh—which is coarse—were fine, and its—too sharp—flavor equalled that of the Golden Russet, it would stand without a rival, or near neighbor, at the very head of the list of winter apples. As it is, it is a *first rate* tree, bearing a *second rate* apple. A hybrid between it and the Golden Russet, or Newtown Spitzenberg, appropriating the virtues of both, would leave little more to be hoped for or wished. The *Baldwin* has never come up to its Eastern reputation with us; the Rhode Island Greening is eaten for the sake of "auld lang syne;" the Roxbury Russet is not yet in bearing, instead of it several false varieties have been presented at our exhibitions. All the classic apples of your orchards are planted here, but are yet on probation.

Nothing can exhibit better the folly of trusting to *seedling* orchards for fruit, for a main supply, than our experience in this matter. The early settlers could not bring trees from Kentucky, Virginia, or Pennsylvania, and, as the next resort, brought and planted seeds of popular apples. A later population found no nurseries to supply the awakening demand for fruit trees, and resorted also to planting seed. That which at first sprang from necessity, has been continued from habit, and from an erroneous opinion that seedling fruit was better than grafted. An immense number of seedling trees are found in our State.—Since the Indiana Horticultural Society began to collect specimens of these, more than one hundred and fifty varieties have been sent up for inspection. Our rule is to reject every apple which,—the habits of the tree and the quality of its fruit being considered,—has a superior, or equal, already in circulation. Of all the number presented, not six have vindicated their claims to a name or a place, and not more than *three* will probably be known ten years hence. While, then, we encourage cultivators to raise seedlings experimen-

tally, it is the clearest folly to reject the established varieties and trust to inferior seedling orchards. From facts which I have collected, there have been planted, during the past year, in this State, at least one hundred thousand apple trees. Every year the demand increases. It is supposed that the next year will surpass this by at least twenty-five thousand.

In connection with apple orchards, our farmers are increasingly zealous in pear cultivation. We are fortunate in having secured to our nurseries not only the most approved old varieties, but the choicest new pears of British, Continental, or American origin. A few years ago, to each one hundred apple trees, our nurseries sold, perhaps, two pear trees; now they sell at least twenty to a hundred. Very large pear *orchards* are established, and in some instances are now beginning to bear. I purchased Williams' Bon Chrétien in our market last fall for seventy-five cents the bushel. This pear, with the St. Michael's, Beurré Diel, Beurré D'Aremberg, Passe Colmar, Duchesse D'Angouleme, Seckel, and Marie Louise, are the most widely diffused, and all of them regularly at our exhibitions. Every year enables us to test other varieties. The Passe Colmar and Beurré D'Aremberg, have done exceedingly well; a branch of the latter, about eighteen inches in length, was exhibited at our Fair, bearing over twenty pears, none of which were smaller than a turkey's egg. The demand for pear trees this year, has been such that our nurseries have not been able to answer it—and they are swept almost entirely clean. I may as well mention here that, besides many more neighborhood nurseries, there are in this State eighteen which are large and skilfully conducted.

The extraordinary cheapness of trees favors their general cultivation. Apple trees, not under ten feet high, and finely grown, sell at *ten*, and pears at *twenty* cents; and in some nurseries, apples may be had at *six* cents. This price, it should be recollected, is in a community where corn brings from twelve to twenty cents only, a bushel; wheat sells from forty-five to fifty; hay at five dollars the ton. During the seasons of 1843 and 1844, apples of the finest sorts, —Jennetin, Green Newtown Pippin, &c.— sold at my door, as late as April, for *twenty-five* cents a bushel; and dull at that.— This winter they command *thirty-seven* cents. Attention is increasingly turned to the cultivation of apples for exportation.— Our inland orchards will soon find an outlet, both to the Ohio River by Railroad, and the Lakes by Canal. The effects of such a deluge of fruit is worthy of some speculation. It will diminish the price, but increase the *profits* of fruit. An analogous case is seen in the penny postage system of England. Fruit will become more generally and largely an article, not of luxury, but of daily and ordinary diet. It will find its way down to the poorest table— and the *quantity* consumed will make up in profit to the dealer, what is lost in lessening its price. A few years, and the apple crop will be a matter of reckoning by farmers and speculators, just as is now the potato crop, the wheat crop, the pork, &c.— Nor will it create a home market alone.— By care it may be exported with such facility, that the world will receive it as a part of its diet. It will, in this respect, follow the history of grains and edible roots, and from a local and limited use, the apple and the pear will become articles of universal demand. The reasons of such an opinion are few and simple. It is a fruit always palatable—and as such, will be welcome to mankind whatever their tastes, if it can be brought within their reach. The Western States will, before many years, be *forested* with orchards. The fruit bears exportation kindly. Thus there will be a *supply*; a possibility of distributing it by commerce,—to meet a taste already existing. These views may seem fanciful— may prove so; but they are analogical.— Nor, if I inherit my three-score years and ten, do I expect to die until the apple crop of the United States shall surpass the potato crop in value, both for man and beast. It has the double quality of palatableness, raw or cooked,—it is a *permanent* crop, not requiring annual planting,—and it produces more bushels to the acre than corn, wheat, or, on an average, than potatoes. The calculations may be made, allowing an average of fifteen bushels to a tree. The same reasoning is true of the pear; it and the apple, are to hold a place yet, as universal eatables—a *fruit-grain*, not known in their past history. If not another tree should be set in this county, (Marion county,) in ten years, the annual crop of apples will be two hundred thousand bushels. But Wayne county has double our number of trees. Suppose, however, the ninety counties of Indiana to have only twenty-five trees to a quarter section of land,—that is, to each one hundred and sixty acres,—the crop, of fifteen bushels to a tree, would be nearly *two millions*.

The past year has greatly increased the cultivation of small fruits in the State.— Strawberries are found in almost every garden, and of select sorts. None among

them all is more popular,—or more deservedly so,—than Hovey's Seedling. We have a native white strawberry, removed from our meadows to our gardens, which produces fruit of superior fragrance and flavor. The crop is not large—but continues gradually ripening for many weeks. The blackberry is introduced to the garden among us. The fruit sells at our market for three to five cents,—profit is not, therefore, the motive for cultivating it, but improvement. I have a *white* variety. Assorted gooseberries, and the new raspberries, Franconia and Fastolff, are finding their way into our gardens. The Antwerps, we have long had in abundance.—If next spring I can produce rhubarb weighing two pounds to the stalk, shall I have surpassed you? I have a *seedling* which last year without good cultivation produced petioles weighing from eighteen to twenty ounces. My wrist is not very delicate, and yet it is much smaller in girth than they were.

In no department is there more decided advance among our citizens than in floriculture. In all our rising towns, yards and gardens are to be found choicely stocked. All hardy bulbs are now sought after. Ornamental shrubs are taken from our forests, or imported from abroad, in great variety. Altheas, Rose Accacia, Jessamine, Calycanthus, Snowberry, Snowball, Sumach, Syringas, Spicewood, Shepherdia, Dogwood, Redwood, and other hardy shrubs, abound. The Rose is an especial favorite. The Bengal, Tea, and Noisettes, bear our winters in the open garden with but slight protection. The Bourbon and Remontantes will, however, drive out all old and ordinary varieties. The gardens of this town would afford about *sixty* varieties of roses, which would be reckoned first rate in Boston or Philadelphia.

While New England suffered under a season of drought, on this side of the mountains the season was uncommonly fine,—scarcely a week elapsed without copious showers, and gardens remained moist the whole season. Fruits ripened from two to three weeks earlier than usual. In consequence of this, winter fruits are rapidly decaying. To-day is Christmas; the weather is spring-like; no snow; the thermometer this morning forty degrees. My Noisettes retain their terminal leaves green; and in the Southward-looking dells of the woods, grasses and herbs are yet of a vivid green. Birds are still here; three this morning were singing on the trees in my yard. There are some curious facts in the early history of Horticulture in this region, which I meant to have included in this communication; but insensibly I have, I fear, already prolonged it beyond your convenience.

Indianapolis, Indiana, Dec. 25th, 1844.

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### The Strawberry.

*Messrs. Editors:*—The season for the blossoming of the Strawberry is at hand, and it behooves all who wish to raise this fine fruit, to examine their beds, and ascertain if they have both male and female plants, and the proper proportion of each. There should be one male to ten or twelve of the females. The blossom of the male is larger and more showy than the blossom of the female. I have been at a loss to describe the two blossoms to persons ignorant of botany, (who would not understand the terms staminate and pistillate,) and enable them to distinguish the difference. I was trying to do this recently, when a Dutch boy was present, the son of one of my tenants, who described the difference so as to make it apparent to all. "Why," said he, "you not know the man from the woman? The man he have the beard, the woman have none." In the female plant, the pistils, or female organs only, are perceptible, and in the little yellow centre, at the end of the stem, in the centre of the flower. By pulling the flower apart, the stamens, or male organs, will be found attached to the hull, but very short and defective. In the male plant, the stamens one-third of an inch long, and like the beard, cover completely what may be called the face of the blossom, with yellow heads, which contain the principle of impregnation. As soon as the white leaf of the blossom falls, every female blossom will show the fruit, whilst in the male blossom, there will generally be no fruit; and where there is any, most of them small and ill-shaped. The reason is, each blossom may be said not to be one, but near one hundred. Each one of the hundred must be impregnated to produce a perfect fruit. The female organs being covered by the stamens, (beard,) are generally defective, and a portion only, if any, are impregnated; and I have never seen a blossom produce a perfect fruit. The portion impregnated swells out, the other shrivels, and the berry contracts in that part. The white and monthly varieties are an exception. In these, both organs are perfect, and, as a consequence, the fruit small. In raising from seed generally, an equal portion of male and female are produced, and

their runners never change their character. But the male soon roots out the female, as it increases faster, being the stronger plant, and none of its energies exhausted in perfecting fruit. When the people of the East are not too wise to examine and understand this subject, they, too, will have gardeners who will supply the market with one hundred and twenty bushels in a day, and buy the finest of fruit at from four to six cents per quart, as is done in the height of their seasons in our market. I am told an Eastern Nurseryman, who has been in the business some forty years, pronounces the system absurd.

If the writer had read the works of all botanists who have written on the Strawberry, during the life of Linnæus, and since his day, he would speak with more modesty. We have not an ignorant gardener, who attends our market, who does not better understand this plant. The same writer says the Hudson Bay Strawberry is thrown by as worthless. Yet this is one of the largest, most productive, and of superior quality, and more cultivated in our State, especially for market, than any other. They are discarded because the character of the plant is not known. An acre of the male and female plants, by themselves, would not, in one hundred years, produce a single perfect fruit. I will give the writer, or any other nurseryman, one hundred dollars for a single root of Kean's Seedling, or any other variety, so perfect in stamens and pistils, as to produce a full crop of fruit, equal in size to the discarded Hudson, or Hovey's Seedling, where not placed contiguous to male plants. Few nurserymen understand the subject, for a plain reason. Within a narrow space, they cultivate some twenty or more varieties for sale. Among so many varieties, they will have more or less plants, and the wind and bees carry the pollen from bed to bed.—This I pointed out to Mr. Buist, who set out a bed of female plants, which he supposed would never fail to produce a full crop, one hundred feet distant from all others, and subsequently wrote me they did not produce a single perfect fruit.—This subject has been for the last eighteen months before our Horticultural Society, and the question submitted to a large committee of talented botanists, and market gardeners. Their report will be made soon after the blossoming season. Those whose past experience did not enable them to give a decided opinion, after one season's experiment, requested another year to make up their report, intending this spring to report their experiments. Mr. Hovey has promised to test the matter as relates to his own seedling, and I shall expect to hear from him as soon as the flowering season is over. I will cheerfully pay him one hundred dollars, for a single root of his seedling, that will, separate from all other plants, yield a full crop, of usual size. It would be worth five hundred thousand dollars to the United States.

N. Longworth.

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### The Strawberry.

Extract from a letter from M. A. M'Intosh, on the cultivation of Strawberries, to the Editor of the Western Reserve Magazine of Agriculture and Horticulture.

"There has been, and is still, amongst cultivators, much diversity of opinion in regard to the male and female qualities of this plant. Some contend, that, to secure a fruitful bed, a certain number of male plants should be distributed through it, while others declare them injurious. My own experience has satisfied me, that the sterile, or male plants, are not only useless cumberers of the ground, but that, if not watched, and carefully extirpated, will, in a short time, overrun the beds, and take exclusive possession, to the utter destruction of the bearing plants. I take especial care to destroy any sterile plants that appear in my beds. I have one and a half acres planted out in beds, which will be in fine order for fruiting this season, and, with the exception of a single bed, the plants of which I had from a market gardener of this place, and which I intend to destroy this spring, it would be difficult to find a male plant in the whole collection; indeed, so confident was I the last season, that my beds were completely cleared of them, that I offered a premium for every plant that could be found in my plantation."

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☞ A writer in the Farmers' Cabinet suspends his bee-hives by fixing two uprights on his hives, and boring a hole in each, inserts a wooden pin; by this crosspiece he hangs his hives under a sort of roof, to protect them from the sun. He says the worms drop out, and the bees fight the moths better. He makes his addition to his hives, by splicing on underneath, a box of the same size as his hives; bees working downward, and seldom upward.

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Lime—excellent with leaves to make potatoes of a good quality.

**Ranunculus.—Renunculus Asiaticus.**

"Yet shall there still be joy,
Where God hath poured forth beauty, and in the voice
Of human love shall still behold in praise
Over his glorious gifts! O Father, Lord,
The all-beneficent! I bless thy name
That thou hast mantled the green earth with flowers,
Linking our hearts to nature."

The Ranunculus is a beautiful half-hardy, tuberous-rooted perennial, a native of the Levant, and was introduced into Europe as far back as 1569, and was, from its introduction, and still is, cultivated as a *Florist-flower*. The appearance of habit of this flower being similar to the Buttercup found in marshy places, it has passed under the name of the "Persian King Cup." The form of the flower being a resemblance to the Rose, the petals being shorter and more compact, their colors various, ranging from white to black, some edged like the Picotee, and others striped like the Carnation, of richness and delicacy unsurpassed. The Ranunculus possessing such a diversity of colors, gives them a most beautiful and imposing aspect to the beholder. The foliage is ternate, or biternate, throwing up a stem about fifteen inches in height, with a flower on the top, also lateral, and frequently one plant will be embellished with ten to sixteen blossoms,

"Emblems of modest grace,
Of unaffected dignity and ease,
Of pure and elegant simplicity."

Their roots are formed of tubers similar to the Dahlia, but small, being about one inch in length. I had a bed of these desirable plants, which was truly fine, but neglecting, when taken up and dried, to pack them in sand, I lost the whole, for the tubers shrivelled up through the summer, and never germinated the succeeding season. Their resemblance being so near the Rose, I recollect placing a yellow flower with some sweetbrier, which passed very well for a Yellow Rose, until exhibited to an old gardener well acquainted with the flower. I have a catalogue in my possession of those beautiful flowers, containing about eight hundred, with names. There are gardeners who profess to have as many as eighteen hundred. It is generally conceded that Joseph Tyso & Son, of Wallingford, Berkshire, and author of a treatise on artificially crossing this flower, have the best collection in England. This flower, generally speaking, has not succeeded in this country, which, I think, must be attributed to want of attention, and not planting them into a suitable soil, or situation, congenial to them in this climate. Mr. Wilder, of Brighton, near Boston, an enterprising florist, I am informed cultivates them to perfection. Why should they not succeed with us? Our climate is certainly as congenial to their culture as Boston. A collection can be purchased in England for about three dollars per hundred; a superior assortment would cost fifty; this would comprise some of the most select. Those generally brought here and sold with Harlem bulbs, are worthless; the tubers appear fair to the eye, and that is all that can be said of them. The Ranunculus generally flowers a short time after the Tulip, if planted in February, as soon as the frost will admit the ground being worked. There are single and semi-double flowers, but the double are considered the Florist-flower; others are of no value. The Florist-flower only wants to be seen to be appreciated. Probably one of the most exciting pleasures would be to raise those plants from seed procured from England, and sow them in February, in pans or boxes, in sandy loam, collected from the common after the turf is taken off, with a portion of old manure, mixed at least six months before used; if planted in old earth, new manure will rot them. The second season, your plants will flower, and in most cases will be single; this circumstance should not discourage; still persevere, and the next season you will find them more double, and some of the best will send up a pericarp, and in most instances without anthers. This will be a good time to impregnate, therefore take a camel's hair pencil and collect the pollen from the anthers of semi-double flowers, and apply it to the pericarp of those possessing good properties, and are nearly double; by fertilizing the seed vessel, it will enable you to get superior seeds, which will give you some advantage over those you can purchase. In planting tubers, great care is necessary, so as to place them erect, for if planted sideways, it will undoubtedly throw the flower-stem in the same direction. The Dahlia, if planted up-side-down, will naturally find its way up. Not so with the Ranunculus. From this circumstance, may be attributed so many failures with persons not acquainted with the fact. The proper time to divide the tubers, is when you take them up, after the flower-stem and leaves die down, as the tubers then are not so brittle as when dry. When the tubers appear dry, pack them in sand, to remain until the time of planting again. In England, where the summers are frequented with gentle showers, these flowers can be produced any time through the year by planting accordingly; and no doubt with proper attention, could be effected here. T. WINTER.

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☞ Spurry is of very high repute in Europe for hay, or to be cut green, or in pasture. And Von Thaer considers it the most nourishing of all forage, and gives the best flavored milk and butter. The seed will soon be more plentiful in the country; at present it is scarce.

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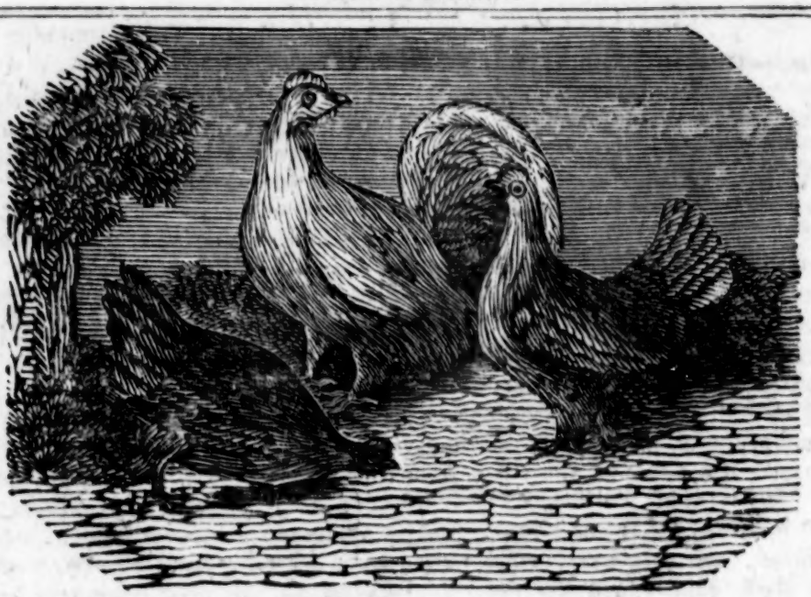
☞ Take the strongest of the runners of Strawberries off in June, if you want to make new plantations.



JAVA BANTAM.

These birds are described in a late London paper, and belong to the Queen, and are kept at her beautiful poultry establishment in Windsor Castle Park. They are perfectly white, with feathered legs, but present no peculiar characteristics of form or structure; their habits, however, are in some respects so singular, as to demand especial notice. The cocks are so fond of the hen's eggs, that they constantly break and suck them; and they have been known to attack the hen, to tear open the ovarium, and eat the egg shells. To subdue this propensity, her Majesty's keeper gave the cocks first a hard boiled egg, and then a marble one to fight with, taking care, at the same time, to keep them from any access to a real egg. No sooner was this done, than an attack on the false egg was commenced, which lasted for a week, till, at last, wearied with their fruitless labor, they gradually gave up all notice of them, and with that abandonment, as was anticipated, they ceased from their destruction of the eggs, and have never been known to attack them since.

They are represented as wonderful layers; and in proper season, their fondness for offspring is so strong, that in a trial of its capacity, a hen in the Queen's possession, sat a period of nine weeks on three successive sets of eggs.

Besides this kind of Bantam, there is a breed of Sir John Seabrights, remarkable for their martial qualities; and a Scotch species, crossed with Grouse-birds; also, a Frizzle-fowl, with singular white, silky, hair-like feathers, with black skins.

These Java Bantams do not differ from the common white Bantam found in many parts of the country. They are very pretty fowls for children to pet. Bantams differ a good deal in color, are of different size, and not all with feathered legs. These pretty fowls come early to maturity, are very hardy, astonishing layers, and very tame.—They do well for the garden, destroying myriads of bugs and insects, and are not large enough to do much injury.—There is no sort of insect, perhaps, which fowls will not eat; they are exceedingly fond of flies, beetles, grasshoppers, and crickets, but more particularly of every kind of grub, caterpillar, and maggot. They will greedily devour also any green scrap, and they will subsist on almost any vegetable substance; they are most partial to the leaves of lettuce, endive, cabbage, spinach, radish, green peas, and all the mild succulent weeds, such as cheekweed and pursley, or fat hen. Fowls, however, should have a mixture of both vegetable and animal food to thrive well. Oats are considered excellent to make hens lay.

### Law for the Protection of Fruit, &c.

We give below the law passed by the late General Assembly of this State in relation to the punishment of depredators on gardens, &c. It is a very good law, as far as it goes, but it ought to have been made a general law, applying to all the State, as was first proposed. In that form the bill was defeated; it was then revived, first for a local law for the county of Cuyahoga, then the fourth section was added, extending it to all the counties of the Reserve, and to such others as the Representatives of the counties might desire; but only five or six requested their counties to be added. We hope the law will be so amended as to apply to the whole State, at the next session.

AN ACT

To punish the offences of cutting down or destroying fruit and ornamental trees, and stealing fruit and vegetables, in certain counties of this State.

Section 1. *Be it enacted by the General Assembly of the State of Ohio*, That if any person or persons within the county of Cuyahoga, shall wilfully, maliciously, and without lawful authority, cut down, root up, sever, injure or destroy any fruit or ornamental tree, cultivated root or plant, fruit, or other vegetable production, standing or growing on or being attached to the lands of another, or shall wilfully and without lawful authority, cut down, root up, destroy or injure any fruit or other ornamental tree or shrubbery, planted or growing on any street, lane or alley, or public grounds in any city, borough or incorporated town in said county; any such person so offending, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by fine, not more than five hundred dollars, or by imprisonment in the jail of said county not exceeding three months, or both, at the discretion of the court, and shall moreover be liable in damages to the party injured.

Sec. 2. In case of prosecution for either of the offences above specified, if the lands therein referred to shall be owned or occupied in common, by two or more tenants in common, the indictment shall be deemed sufficient if the name of any one or more of such tenants in common shall be named therein.

Sec. 3. That all prosecutions under the provisions of this act, shall be by indictment before the court of common pleas in said county, or by an action of debt before any justice of the peace of the said county, and shall be commenced within one year from the time such offence shall have been committed, and not afterwards; and all fines collected under the provisions of this act shall be paid into the county treasury of said county for the use of the same.

Sec. 4. This act shall extend to, and be in force in the counties of Geauga, Lake, Ashtabula, Trumbull, Huron, Lorain, Erie, Wood, Summit, Medina, Portage, Fayette, Seneca, Sandusky, Franklin, Washington, Greene, Tuscarawas, Meigs, and Richland.

JOHN M. GALLAGHER,
Speaker of the House of Representatives.
DAVID CHAMBERS,
March 13th, 1845. Speaker of the Senate.

*Secretary of State's Office,*
March 22, 1845.

It is hereby certified, that the foregoing is a correct copy of the original rolls now on file in this office.

SAMUEL GALLOWAY,
Secretary of State.

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### Norton's Seedling and Ohio Grapes.

*To N. Longworth:*—Will you do us the favor to give a few particulars respecting these grapes? In Mr. Hovey's catalogue for 1844 and 1845, they are both described as "p. red," which I conclude means pale red. William R. Prince describes Norton's Virginia, or Ohio, "d. p.," dark purple. Parsons & Co. describe Norton's Virginia Seedling as black. Are the grapes which you have, correctly called Norton's Virginia Seedling and Longworth's Ohio? Perhaps it is a wise father that knows his own child; and I suppose you know your own grape vine. The Ohio, or Segar-box Grape, which I have examined at various times in your garden, I consider a black grape, with a rich purple brown; so, too, the Norton Seedling, differing, however, in other respects; and so I described them to Mr. Downing. Either you have not got, or don't know your own grapes, or Mr. Hovey is in some way in error.

Walnut Hills Nursery. C. W. ELLIOTT.

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☞ Mr. T. Winter, has issued another catalogue of his superb *Dahlias* for this year,—among which we see many varieties entirely new to this country. We understand this to be his last, for he intends giving up the culture of flowers for sale. Mr. Winter has long been a contributor to this Magazine; though he intends cultivating only for amusement, he assures us he will still feel a pleasure in writing as heretofore. We recommend those in want of good Dahlias to purchase of him, for no doubt he will sell low in order to dispose of his stock.

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*Sore Backs or Galls on Horses.*—Rub white lead in sweet oil until a good paint is made, and apply a coating of this to the injured place. Milk will do when no oil is to be had. It is one of the most effective applications. Some, for the same difficulty, use a solution of vitriol in water; but in most cases the white lead is preferred.

### The Rose.

[COMPILED FROM BUIST'S ROSE MANUAL.]

The *Noisette*, is the first named of those which bloom through the whole season. The name comes from Mr. Noisette, of Charleston, who raised the first in 1815; it was supposed to be the production of the common China and White Musk Cluster. The leading feature of this class of Roses, is the clustering of its buds and flowers. Some of them are quite hardy here at Cincinnati; but generally they are much better for being well wrapped with straw, or for being laid flat on the ground, and covered with litter five or six inches. The same applies to the Bourbons, Ramontantes, Bengals, and some of the Teas. In the winter of 1843–44, Mr. Hoffner left a bed of Roses partially exposed through the winter with good success; covering the ground well a foot or eighteen inches deep, with leaves from the woods, so that only the tops were exposed; among them were the Triumph of Luxembourg, White Tea, &c. &c. The Everblooming Roses richly repay this little care, and must become greater favorites yearly; some of the Annual Roses, such as George the Fourth, Harrisonii, &c., will not be soon driven out from a good collection; but for small gardens, such Roses as Madame Desprez, General Dubourg, Lamarque, Fellenberg, and others of the like class, are greatly preferable.

*Amiée Vibert*, is a beautiful pure white.

*Belle Marseillais*, is very double, approaching crimson.

*Charles the Tenth*, rosy purple.

*Champneyana*, perfectly hardy.

*Chromatilla*, or *Cloth of Gold*, is quite new.

*Conque de Venus*, creamy white, with pink centre.

*Cora L. Barton*, clear rosy pink, large, fragrant and double.

*Euphrosine*, new and sweet scented, rosy buff.

*Fellenberg*, brilliant scarlet in the fall, pale red in spring.

*Jaune Desprez*, rosy buff, inclining to orange.

*La Biche*, pale flesh color, changing to white.

*Lactans*, pure white.

*Lamarque*, yellowish white, celebrated and popular.

*Le Pactole*, pale sulphur yellow, dwarf habit.

*Lutea*, or *Smithii*, pale lemon color.

*Madame Byrne*, yellowish white, with pink centre.

*Orloff*, profuse, bright rose.

*Similor*, sometimes orange color, at others pale blush.

*Solfatare*, is a celebrated new rose, of a bright sulphur yellow; it has recently flowered here, under the care of Mr. Ross, in the greenhouse, but is not so yellow as was expected to be, though extremely beautiful and desirable. His plant shows sixty-two buds. In the open air, it will most likely deepen in its color.

*Superba*, pale pink, old and popular.

*Walter Scott*, bright rose.

We do not give the whole of the names enumerated, nor the full descriptions. All lovers of the Rose will possess themselves of Mr. Buist's valuable little work, which is more full than we can be, and besides, contains directions for cultivation, propagating, &c. &c. Noisette Roses require to be pruned close; shoots that have grown two feet, may be cut to within six inches of the preceding year's growth—those of ten feet, to from two to six feet. The soil cannot well be too rich. C. W. E.

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☞ We lately had the pleasure to fall into conversation with Mr. Pullan, a Nurseryman of established reputation near Middletown, Butler county, Ohio. We are glad to hear that his opinion confirms our own on the subject of the undoubted proofs exhibited everywhere around us of the taste and thirst for knowledge in Agriculture and Horticulture. Mr. Pullan stated to us, that most of the farmers in his neighborhood are going in strongly for all kinds of the best fruit trees,—that as soon as his peaches and other trees showed fruit unusually fine for the neighborhood in which he lives, he has had a large and constant demand for his trees. Mr. Pullan we consider another striking instance of the advanced degree of knowledge men can arrive at in the business of cultivating, who have paid particular and enlightened attention to the soil, climate, and other important circumstances in which they are operating.—This observation is applicable to the leading Nurserymen around us, on both sides of the Ohio, near our city. It is this close observation and consistent practice which is so valuable to our sure progress on the road to improvement and knowledge. And it is the recording of these facts, and this information, which renders a Magazine, devoted to the subject, so useful to those living within the sphere of where these facts are obtained and proved, and not a work that is published at a great distance from the scene of action. E. J. H.

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☞ The best manure for vines, is the branches pruned from the vines themselves in July or August cut into small pieces, and immediately mixed with the soil.

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*Sour Sauce.*—An excellent sauce for boiled puddings, is made as follows:

Take two cups of molasses, one of water, half a cup of strong vinegar, and a piece of butter as large as an egg; simmer them together, and add a little thickening, or not, as it suits your taste.

### The White Doyenne Pear,

WITH ITS TWENTY-FIVE SYNONYMES,

Quoted from the London Horticultural Society's Catalogue, for the information of those who have not access to that standard work:

| | |
|---|---|
| Doyenné Blanc, | Bonne-ente, |
| White Beurre, | A Courte Queue, |
| White Autumn Beurre, | Monsieur, |
| Dean's, | Citron de Septembre, |
| Snow Pear, | Valencia, |
| Pine Pear, | Kaiserbirne, |
| Warwick Bergamot, | Kaiser d'Automne, |
| Beurre Blanc, | Weisse Herbst Butterbirne, |
| Saint Michael, | Dechantsbirne, |
| Poire de Limon, | Beurre du Roi, (of some.) |
| Poire Neige, | Beuerre Anglaise, (ib.) |
| Poire de Seigneur, | Muscat d'Automne, (ib.) |

Passe Colmar d'Autumne, (of some.)

*Mr. Hooper:*—Permit me to make a few remarks on the above Pear. This fruit, I apprehend, no one who has had the pleasure of tasting its delicious flavor and richness, will for a moment withhold the meed of praise due to it in times past. But here we must stop, and say it has passed into its dotage, or, as the common phrase is, it is a worn out variety. However reluctant we may be to part with it, we shall have to content ourselves to do so.

When the February number of your Magazine was put into my hands, containing an engraving and description of it, I feared its effects in misleading the inexperienced, and was hence led to make the remarks to you I did, which you were pleased to refer to in your next, (March number,) and in connection with which you said all the occasion seemed to call for.—Why it should have again been referred to editorially, in the manner it is, in the last, (April number,) is not so readily perceived. However, with your indulgence, I will state a few facts for the benefit of such of your readers as are not experienced in fruits, and so drop the subject, letting them pass for what they are worth.

About the year 1828 or 1829, I purchased a quantity of Pear trees of N. Longworth, Esq., who was then conducting the Nursery business, (to whom, by the by, the public are largely indebted, for his untiring exertions, at an early day, to introduce fine fruits,) among which were a number of the above Pear. I also purchased an additional quantity of Pear trees of a person up Licking, making some ten or twelve trees of the Pear in question. They all flourished, and came into fine bearing, and certainly nothing could well have exceeded the richness, flavor, and beauty of the fruit for a number of years. But when my trees had attained some size and age, the fell destroyer, (of which I had been warned by Mr. Russell, lately Corresponding Secretary to the Cincinnati Horticultural Society, who had with raptures viewed the ample load of perfect fruit under which the trees were bending,) in the form of a thick coating of black rust, over the surface of the fruit, before half grown, which caused the skin to crack, shrivel, dry up, and the fruit become worthless. After witnessing this mortifying sight two or three years, I grafted other sorts in the trees, which are doing well. This disease is not confined to my place, but has prevailed in Indiana, and other parts of the West, for many years, so much so that a highly respectable Nurseryman, near Richmond, Indiana, (Andrew Hampton,) told me years ago that he should as soon think of taking a man's money out of his pocket, as to sell him a tree of the fruit referred to, although he had large trees in his Nursery at the time.

All my observations at the East, with a single exception, went to show that the black rust had almost extinguished the sort. It is true, here and there a tolerable fine specimen is occasionally produced; but this goes more to show what can be done under peculiar circumstances, than for anything to be relied on as a general crop. Kenrick, in speaking of this fruit, says:—"The tree was once with us most extraordinarily productive; the fruit the fairest, the most beautiful, and delicious, and universally admired; this most ancient of all pears has now become an outcast, intolerable even to sight." I am inclined to think that all the good specimens presented are from young trees, and when they attain some age and size, they will share the common fate; should it prove otherwise, I shall rejoice to find myself in error.

Mr. Downing, of Newburg, the exception above alluded to, informed me that the disease is not known in that region. The fact of its existence in other parts of the country, he is not ignorant of; and if I understand him right, he does not doubt their identity, but finds himself at a loss to account for it, unless it may be a different stock. The fine specimens which Mr. Buchanan exhibited year before last, were from a tree he purchased of me. This fact I think bears me out in the conclusion, that on young trees the fruit may be fine, and exempt from the disease, but subject to it at a more mature age. Mr. Buchanan's tree was last year destroyed by the fire blight.

Hoping that you will not deem me tedious, considering the importance of correct information, I remain yours with respect,

A. H. ERNST.

Spring Garden, April 14th, 1845.

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*Mustard in Convulsions.*—We find that Charles S. Tripler, M. D., Surgeon United States Army, recommends the use of mustard in the convulsions of children. He remarks, that, "from my experience of the remedy, I do not hesitate to recommend its employment in these troublesome cases, in preference to any internal remedies with which I am acquainted."

## Guano,

### THE GREAT FERTILIZER.

From a work on *Guano*, its origin, properties, and uses, showing its importance to the farmers of the United States, as a cheap and valuable manure, published in New York, by Wiley & Putnam, we are enabled to make a few observations, which we think may be interesting, if not at present, on account of its price, of great use to a majority of our *Western* farmers and gardeners. It appears from the trials that have already been made in this country, that Guano is as well adapted to our soil and climate, as to those of Peru and of England.—This is certain, however, that where properly applied, it has been found to increase crops beyond any other manure. It will bring forward roots and vegetables ten or fifteen days sooner than any other fertilizer. It has been found particularly valuable for *Market Gardens*. In one instance, reported from good English authority, applied to early potatoes, the guano was found to produce a heavier crop, and of a deeper green and more luxuriant appearance, than those potatoes manured with nitrate of soda. A little may be well applied round the shoot of the potato, soon after its appearance. With turnips, the same great effects were produced. This manure has been applied with wonderful results on grapes, strawberries, and on all grasses. It is particularly useful for plants sowed in *beds*, and therefore the *tobacco planter* is greatly benefitted thereby, as the plants, after being raised by it in beds, may be *transplanted over large fields*. It has been found to save the turnip plant from the ravages of the fly, by pushing it beyond its reach, or by emitting an odor that repels its attacks. It also kills slugs, wireworms, &c. in the ground. On celery, it is used with prodigious effects. The chemical analysis of guano, by the famous chemist, Ure, of London, is as follows:

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|---|---|
| Azotized matter, including urate of ammonia, and capable of affording from eight to seventeen per centum of ammonia by slow decomposition of the soil, | 50.0 |
| Water, | 11.0 |
| Phosphate of Lime, | 25.0 |
| Ammonia, phosphate of magnesia, phosphate of ammonia and oxalate of ammonia, containing from four to nine per centum of ammonia, | 13.0 |
| Silicious matter from the crops of the birds, | 1.0 |
| | 100.0 |

The highest value of guano will be seen in turnips, swedes, cabbages, rape, tobacco, potatoes, flax; the lowest in oats, wheat, corn, barley, and grapes. One hundred pounds of guano may be said to be equal to five tons of the best stable manure. Of course, guano shows its greatest action on the poorest soils, there being on them less of ammonia than on rich ones.—For the growth of stem, leaf, and root, the solution of guano is about as useful as the whole substance, but for a seed crop the whole guano is necessary; two hundred and fifty to three hundred pounds is sufficient for one acre, broadcast. It should be kept as free from air as possible, in barrels; and it should be covered directly. It will produce pumpkins of enormous size. The African is not so rich or valuable as the Peruvian Guano; but the difference in price makes the African about equal, if properly applied. Guano, from a statement from Mr. Skirving, of the Walton Nursery, Liverpool, not only had an excellent effect on wheat, grass land, and potatoes, but used in the Nursery in a liquid state, surpassed, he observes, any manure he ever used. He says, its effects on young fruit and forest trees, were wonderful; also upon Hot-house and Green-house plants of every description; even the exotic heaths, which other manures injure, flourished beyond precedent, when watered with it. It will also tend to produce double flowers, like the highly nitrogenous stable manure. Used especially in the spring months, many crops are doubled, and rhubarb, sea-kale, and asparagus, are obtained much earlier,—a double advantage. It is best applied on a *wet* day; but the crop should not be too far advanced. On a crop raised by order of Sir Robert Peel, at his seat at Tamworth, stable manure produced in the following proportion nine bushels of potatoes:—Potter's manure, eleven bushels—and Guano, fifteen bushels. Guano answers well for onions, leeks, spinach, &c. with from two to three barrowfuls of sand and good soil,—half and half. From root cuttings put into the ground in the spring, sea-kale was obtained in the fall equal in size and strength to those from old plants. It is a preventive of *clubbing*, so common in all the cabbage tribe. It should be well dug in at the time of planting, and used as a top-dressing, when required, and applied during rain in this latter way. The directions for using Guano are:—To keep it from direct contact with the seeds and roots of plants; to use it shortly before or after rain; to cover or mix it with the soil immediately, when not used as a top-dressing,—when used as a top-dressing, to mix it with three or four times its bulk of earth, or some less pungent manure, that its strength may be diluted and not burn the plant. The Peruvians apply Guano at three different times to the growing crop; first, when the plant appears: second, when in flower: and third, at the formation of its seed. One good direction for liquid guano is as follows:——Two pounds of Peruvian guano to twelve gallons of water; and may be used three or four times during the growing, not the ripening season.

Huxley & Co., East Fifth street, near the Dennison House, have a barrel of the genuine Peruvian Guano, for those who may wish to try it in this neighborhood. We are anxious to see it well *tried* here, that we may depend upon our own practice, and not merely upon the statements of others, either in Europe or in the East.

E. J. H.

### Freezes and Fruits.

We do not expect in this neighborhood to eat much from our own trees, either of peaches, apricots, nectarines, plums, or cherries. The apples are much injured, (the early ones destroyed;) yet we hope for a small supply. Grapes, raspberries, and strawberries, are yet good, and show signs of a large crop. The severity of the frost was almost unheard of in this vicinity; the thermometer, in some situations, going as low as twelve degrees of Farenheit.—In the preceding frost it stood at twenty degrees. At eight o'clock in the evening, it was not believed by some that pomegranates, hydrangeas, and the half hardy plants, would suffer, and many who had turned them out lost them entirely, or in part. They may push from the root, or near it, and persons should not be too hasty in throwing them by. What will be the effect of this frost? So far I have observed that one young apple tree shows signs of sickness. Some young and thrifty weeping willows are blighted; apparently the same blight as that of last year. I *believe* it to be the effect of the frosts in this case. It is not a bad arrangement that the frost should thin away an excessive crop, for the cultivator never does. The peach trees in this part have not recovered from the exhaustion of the crop of the year before last; and, although a great disappointment, there is consolation in it.—Our apples we can not so well spare; yet these I do not think are entirely destroyed. It behooves us, however, to protect those remaining, against the depredations of the caterpillars, which show their houses on almost every branch, particularly of the wild cherry trees. They soon spread from tree to tree, and should be exterminated at once. I use a ball of tow, wet with turpentine, on a pole; it makes a flame which destroys the worm and nest, without serious injury to the tree, and is much more effectual and speedy than any plan which I have seen tried. If every man would destroy them from his own trees, for a few years, we should in the end have none to destroy.

Walnut Hills Nursery. C. W. E.

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### Native Fruits.

The wish to accomplish something, is common in Horticultural Societies, as well as with simple individuals. The man who has raised from the seed, or is enabled to bring to notice a new fruit or plant, is very likely to over-value it; and one of the uses of these Societies should be to keep things straight. Yet a single specimen is not always sufficient to decide upon, as in the last season the sweet Bellflower, sent from Troy, was thought to be a poor apple, yet Mr. Knoop tells me that it is one of the best, and one evidence is, that they sell ten of it to one of any other. Native fruits are sometimes desirable for their hardiness or productiveness in their own climate, and in such cases a second or third rate pear or apple may be worthy of cultition; but when our Catalogues contain from one to two hundred names already of pears and apples, (some thirty or forty of which will take in a great variety of all good qualities,) and other things in proportion, our Fruit Committees should be careful how they add to the list. I doubt whether any good comes to the Nurserymen in the end. I have had orders this spring for this, that, and the other apple, pear, &c., shown here last season as Western fruits, most of which were not thought good enough even for a notice in the annual report. They were reported in the weekly papers, without note or comment. I cannot see the necessity for a Fruit Committee, if they do not discriminate; & should they give an unfavorable opinion of a fruit, it surely will not break up the Society. Had the characters of the fruits shown been hinted at, it would have saved individuals some expense, and me some trouble. Horticultural Societies are not solely useful in bringing to notice Western fruits, or Eastern fruits, but for a variety of other purposes, too numerous to mention. C. W. E.

Walnut Hills Nursery.

### The Flower Garden for May.

The unexpected severity of the weather last month was not only felt by the amateur,—the florist suffered as well; and it will make our spring show of floral favors rather late. Many valuable plants have been entirely cut off with the frost and dry cutting winds. Those who have been fortunate in sowing seedlings, should take advantage of cloudy weather, and transplant them to where intended to flower. I would recommend another sowing of annual, biennial, and perennial flower seeds. Dahlias, for early flowers, may be planted in the open ground; those intended for late flowers, may be planted also in the ground, leaving the crowns of the plant above, and when sufficiently sprouted, divide the root with a knife; in planting Dahlias, never allow but one stem to each stake, if your object be good flowers. Tulips done flowering, should have the seed-pod broken off; if allowed to ripen, it will weaken the bulb. To save seed of the Tulip, with a view of raising new varieties, is a tedious operation, as it would take seven years to bring them to flower, and probably several more "*to break their colors*,"* and when done, in all likelihood not one would be so good as could be purchased for a dime. When the stem and leaf of the tulip die down to within three inches of the ground, take them up, dry, and pack them away until the fall. Hyacinths must be taken up when their leaves die down. Crocuses will now be ready to take up; these bulbs are best preserved in sand, being small, are very apt to dry up and be good for nothing. The last of this month, take up Crown Imperials; those bulbs are sometimes allowed to remain in the ground for three years, without injury; in a small garden, it is best to remove them every season, as the ground will deteriorate, if allowed to remain in the same place long. Still continue to tie up Carnations, Picotees, and Pinks, as the flower-stems spindle up. Keep your Roses tied up neatly, for nothing looks so bad as a Rose-bush dangling about the ground. This is a good time to propagate the double scarlet Lychnis, by cuttings of the flower-stem before the flowers expand; let each cutting consist of three joints, two of which must be under ground, in a shady place, and be kept well watered. Propagate the double Wall-flower by slips of strong shoots, stripping the leaves half way up, and plant them in the shade and water freely. If any Cape Bulbs remain out of the ground, plant them, if you wish flowers. Turn over the ground after rain with a rake, and endeavor to make this department as neat as possible.

#### THE PARLOR.

Geraniums will now be in flower, and require air and water; should the weather be mild, you had better set them out of doors to give them strength. Camellias must be syringed regularly, if the weather should be warm and dry. Take cuttings of Chinese Chrysanthemums; and those who wish to divide the roots, let it be done the last of the month; cuttings make the best plants, and will root readily in the shade at this season; never allow but one stem to each pot. Propagate Roses by cuttings, if you wish to increase your stock. Cuttings should be taken of Geraniums, Verbenas, and Heliotropes. Seeds, for parlor culture, may still be sown, to make a pretty appearance for the window. Oleanders, Oranges, Lemons, and Myrtles, may now be removed into the open air. In dry weather, never omit to water your plants; it is as necessary as food is to the animal world.

T. WINTER.

* A term made use of by Florists, when the Tulips develope their colors distinctly, so that their floral perfections can be depended on.

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### Our Horticultural Department.

In this it is our purpose to do more the coming year, than we have yet been able to do.—So far, we have depended more upon our friends, who have the leisure and the taste, than upon any time or attention that we could afford to give. When we took up the Western Farmer and Gardener, it was almost hopelessly fallen, and from its want of character for punctuality, &c., we are satisfied that we should have had less to contend with in commencing a *new* paper, than we have had with *its* name and fame. The name, however, is a good one, and our principal had, most likely, a sort of affection for the bantling, which he had helped to raise.—We are now on a sure basis, and will return the favors of our friends; the more they *will* do for us, the more we *can* do for them.

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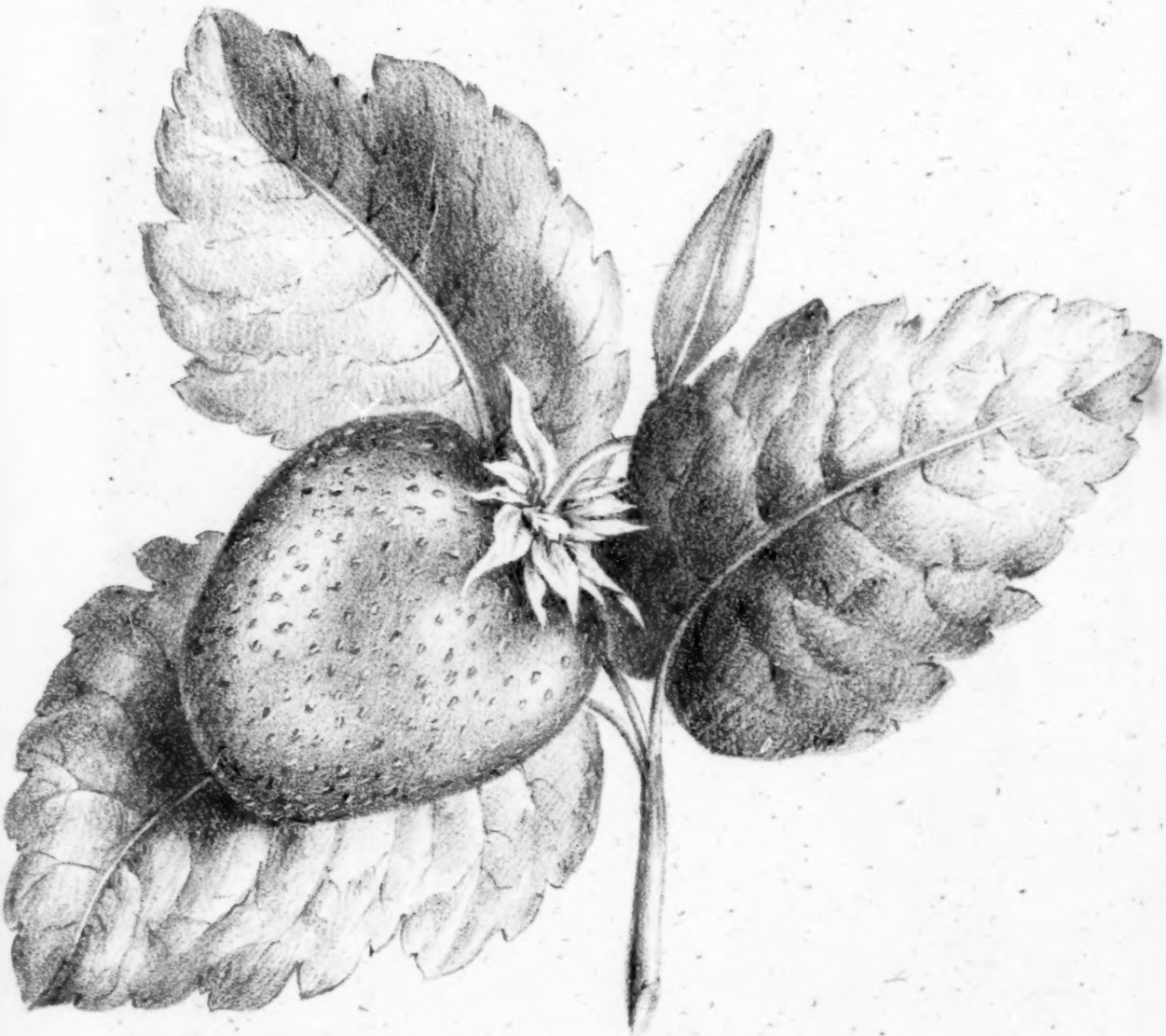
THE ROSE MANUAL, containing accurate descriptions of all the finest varieties of Roses, properly classed in their respective families, their character and mode of culture, with directions for their propagation, and the destruction of insects, with engravings. By Robert Buist, Nurseryman and Florist, Philadelphia.

We have at length obtained a copy of this work. There has not appeared for some time among florists, a book that has excited so much attention as this. The volume contains the result of twenty years' experience on the subject of which it treats. To those who are forming collections of this queen of flowers, this treatise will be found of great service. To the ladies, who are rose fanciers, it must be an offering of peculiar interest. The demand for this book has been very great, and we are happy to find still continues. It is highly deserving of public patronage. We are very desirous of seeing the love of flowers largely diffused through our city and its neighborhood. HUXLEY & Co., East Fifth street, have a new catalogue of the choicest flower seeds from Europe, just now received at their store.



*Hovey's Seedling.*